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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/612,954
Filing Date: July 07, 2003
Appellant(s): LEE ET AL.

Lee et al.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/25/06 appealing from the Office action mailed 3/21/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

This appeal involves claims 1-7.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 5,917,865 Kopmeiners et al. 06-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kopmeiners et al. (U.S. 5,917,865).

With respect to claim 1, Kopmeiners et al. discloses a method in a wireless transceiver in figures 2a and 2b. Kopmeiners et al. discloses setting a gain to an initial gain value for mapping a received wireless signal to a first power value to an input circuit, element number 120, having a prescribed input range and amplifying with element number 110 the signal with the initial gain value to the first power value (Column 5, lines 8-13). Kopmeiners et al. also disclose determining if the power of the

signal does not exceed the prescribed input range, then determining an optimum gain for the received wireless signal relative to the initial gain and power values (Column 5, lines 19-24). Kopmeiners et al. also discloses that if the first power value exceeds the prescribed input range, setting the gain to a minimum value by decrementing the gain value so it does not exceed the prescribed input range and then determining the optimum gain for the received signal based on this minimum gain value (Column 5, lines 16-17 and Column 2, lines 57-65). Kopmeiners et al. further discloses outputting the received wireless signal at the optimum gain (Column 5, lines 19-24).

With respect to claim 4, Kopmeiners et al. discloses a wireless transceiver including an input circuit, element number 120, having a prescribed input range (Column 4, lines 26-30). Kopmeiners et al. also discloses a digital gain controller, element number 130, for amplifying a received wireless signal to an optimum gain value (Column 2, lines 45-56). Kopmeiners et al. discloses setting a gain to an initial gain value for mapping a received wireless signal to a first power value to an input circuit, element number 120, having a prescribed input range and amplifying with element number 110 the signal with the initial gain value to the first power value (Column 5, lines 8-13). Kopmeiners et al. also disclose determining if the power of the signal does not exceed the prescribed input range, then determining an optimum gain for the received wireless signal relative to the initial gain and power values (Column 5, lines 19-24). Kopmeiners et al. also discloses that if the first power value exceeds the prescribed input range, setting the gain to a minimum value by decrementing the gain value so it does not exceed the prescribed input range and then determining the optimum gain for

the received signal based on this minimum gain value (Column 5, lines 16-17 and Column 2, lines 57-65).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopmeiners et al. (U.S. 5,917,865) in view of Wheatley, III (U.S. 5,732,341).

With respect to claims 2 and 5, the method of Kopmeiners et al. is described above in the discussion of claims 1 and 4. Kopmeiners et al. further discloses setting the initial gain value based on the dynamic range of the wireless transceiver (Column 2, lines 45-51). Kopmeiners et al. does not expressly disclose setting the gain based on a prescribed signal to noise ratio. However, Wheatley, III teaches using prescribed signal to noise ratio as the basis for setting the gain of transceiver (Column 6, lines 12-20). Therefore, it would be obvious to one of ordinary skill in the art to apply Wheatley, III's technique of using signal to noise ratio in Kopmeiners et al.'s method in order to have a

quality factor for the basis of the gain setting thus removing unwanted noise from the transceiver.

With respect to claims 3 and 6, Kopmeiners et al. further discloses an analog front-end amplifier, element number 110, which inherently has a maximum analog gain (column 4, lines 10-11).

With respect to claim 7, since an OFDM receiver configured for IEEE 802.11a protocol are extremely well known in the art, it would be obvious to one of ordinary skill in the art to use the modified wireless transceiver of Kopmeiners et al. and Wheatley, III as an OFDM receiver in order to be compatible with IEEE 802.11a protocol.

(10) Response to Argument

A) Appellant's arguments, with regard to the anticipation of claims 1 and 4 by Kopmeiners et al., have been fully considered but are deemed not persuasive for following reasons:

A1) Appellant argues that Kopmeiners et al. do not disclose "determining the optimum gain relative to the initial gain value and the first power value". The examiner respectfully disagrees. Kopmeiners et al. teach determining the final/optimum gain of the system in Column 5, lines 19-24. Since Kopmeiners et al.'s system makes coarse adjustment after the initial gain value has been applied and after the first power value has been checked to be in the dynamic range, the optimum gain is determined relative to the initial gain value and the first power value. The word "relative" does not

necessitate the optimum gain value be determined solely from a single power value as the appellant argues. The word "relative" only requires that the optimum gain is determined with reference to the initial gain value and the first power value, which Kopmeiners et al.'s system clearly does.

A2) In response to appellant's argument that the references fail to show certain features of appellant's invention, it is noted that the features upon which appellant relies (i.e., "determining the optimum gain" is not performed by further changes in amplification of the received wireless signal, but by computing the optimum gain based on the first power level created by amplifying the received wireless signal at the existing gain) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, since the claim does not detail any specific operation of how "determining the optimum gain for the received wireless signal relative to the initial gain value and the first power value" functions, the technique of Kopmeiners et al. reads on the appellant's claim language.

A3) The appellant also argues that Kopmeiners et al. do not teach determining the optimum gain based on setting to a minimum gain value, if the first power value exceeds the threshold. The examiner respectfully disagrees. Kopmeiners et al. disclose checking if the signal is in the range in step 210 of figure 2a. If the signal is outside the range (i.e. exceeds the threshold), the gain is adjusted in step 215, which was interpreted as setting to a minimum gain value. The process returns to checking if the signal is the range and then determines the optimum gain as shown in figure 2b;

therefore, teaching that the optimum gain is determined based on the setting the gain to a minimum gain value.

A4) The appellant next argues that Kopmeiners et al. does not disclose the limitation of "setting the gain to a minimum gain value. The examiner respectfully disagrees. Kopmeiners et al. disclose that if the first power value exceeds the prescribed input range, setting the gain to a minimum value by decrementing the gain value so it does not exceed the prescribed input range and then determining the optimum gain for the received signal based on this minimum gain value (Column 5, lines 16-17 and Column 2, lines 57-65). In Kopmeiners et al.'s system, when the power value is out of the input range, it has two possibilities of either incrementing or decrementing the gain by 20 dB depending on if the power was below or above the input range respectively resulting in two possible gain settings of -20 dB and 20dB. So by decrementing the gain value, Kopmeiners et al. is setting the gain value to -20dB, which is seen as the minimum gain value of its system.

Consequently, Kopmeiners et al. disclose all claim limitations of claims 1 and 4 thus anticipating the respective claims.

11) ***Conclusion***

For the above reasons, it is believed that the rejection is proper, and the Board of Patent Appeals and Interferences is therefore respectfully urged to sustain the Examiner's rejection.

Respectfully submitted,

Adeel Haroon AU: 2618

Oct. 27, 2006

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